REMARKS

Reconsideration of the instant application is respectfully requested. The present amendment is responsive to the Office Action of December 7, 2005, in which claims 1-16 are presently pending. Of those, claims 1-5, 8-13 and 16 have been rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent 6,646,259 to Chang, et al. In addition, claims 6, 7, 14 and 15 have also been rejected under 35 U.S.C. §103(a) as being unpatentable over Chang, in view of U.S. Patent 6,303,399 to Engelmann, et al. For the following reasons, however, it is respectfully submitted that the application is now in condition for allowance.

Claims 1 and 9 have been amended as set forth above to more particularly point out that the initial conductive material is formed only on a localized area of the substrate, and (in the case of claim 9) without blanket coverage of the conductive material on the entire substrate. Support for this amendment may be found at least in paragraph [0018] of the specification "[t]hus, by precise control of the scan location and pattern of the low-energy electron beam, 110, a local conductive layer deposition may be implemented..." as well as in paragraph [0019] of the specification "[b]y not implementing a blanket deposition of the conductive layer 112, the present approach avoids unnecessary coverage of wafer real estate located outside the area of interest with respect to the TEM inspection..."

Thus amended, the Applicant respectfully submits that the outstanding §103 rejections have been overcome, since (for purposes of localized formation of a conductive layer) a low-energy electron beam deposition would not be analogous or equivalent to physical vapor deposition.

For an obviousness rejection to be proper, the Examiner must meet the burden of establishing that (1) all elements of the claimed invention are disclosed in the prior art;

(2) that the prior art relied upon, coupled with knowledge generally available in the art at the time of the invention, must contain some suggestion or incentive that would have motivated the skilled artisan to modify a reference or to combine references; and (3) that the proposed modification of the prior art must have had a reasonable expectation of success, determined from the vantage point of the skilled artisan at the time the invention was made. *In re Fine*, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988); *In Re Wilson*, 165 U.S.P.Q. 494, 496 (C.C.P.A. 1970); *Amgen v. Chugai Pharmaceuticals Co.*, 927 U.S.P.Q.2d, 1016, 1023 (Fed. Cir. 1996).

With regard to the second element, there are three possible sources for a motivation to combine (or modify) references: the nature of the problem to be solved, the teachings of the prior art, and the knowledge of persons of ordinary skill in the art. *In re Rouffet*, 149 F.3d 1350, 1357, 47 USPQ2d 1453, 1457-58 (Fed. Cir. 1998) (The combination of the references taught every element of the claimed invention, however without a motivation to combine, a rejection based on a *prima facie* case of obvious was held improper.). The level of skill in the art cannot be relied upon to provide the suggestion to combine references. *Al-Site Corp. v. VSI Int'l Inc.*, 174 F.3d 1308, 50 USPQ2d 1161 (Fed. Cir. 1999). Furthermore, the mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990).

A statement that modifications of the prior art to meet the claimed invention would have been " 'well within the ordinary skill of the art at the time the claimed invention was made' " because the references relied upon teach that all aspects of the claimed invention were individually known in the art is not sufficient to establish a *prima facie* case of obviousness without some objective reason to combine the teachings of the references. *Ex parte Levengood*, 28 USPQ2d 1300 (Bd. Pat. App. & Inter. 1993). See also *In re Kotzab*, 217 F.3d 1365, 1371, 55 USPQ2d 1313, 1318 (Fed. Cir. 2000).

In the Chang reference, one of the stated purposes of forming the conductive layer 104 (in addition to avoiding the charging effect of ion beams) is to isolate the photoresist layer 102 from a moisture environment and insulate the photoresist layer 102 from oxidation. (Chang, col. 3, lines 47-50) Accordingly, since the photoresist layer 102 in Chang is formed over the entire substrate (with the exception of the via hole shown in FIG. 2A), it stands to reason that the conductive layer 104 would necessarily also be formed over the entire substrate, such as by physical vapor deposition.

It is noted that, as to claims 5 and 13, Chang only teaches in column 4, lines 7-12 that the sample sizes themselves have dimensions of about 10 microns by about 5 microns by about 0.2 microns. This does not necessarily correspond to the area of the conductive layer formation itself. In other words, the presently claimed conductive layer formation can be tailored to the intended sample size, whereas the conductive layer formation in Chang (being a blanket layer) would necessarily encompass more than just the intended sample area.

Accordingly, since there is no motivation in the Chang reference itself to form a localized conductive layer, a low energy beam deposition process would not be an analogous method of forming the layer, since this would necessarily involve bringing the beam in contact with substantially the entire surface of the wafer. As such, one skilled in the art would be discouraged by the Chang reference from an electron-beam formation technique, in favor of a blanket, physical vapor deposition technique that provides more extensive coverage in a more efficient manner. In view of this, the Applicant respectfully submits that the present amendment has overcome the §103 rejections thereto, and it is respectfully requested that the same be withdrawn.

For the above stated reasons, it is respectfully submitted that the present application is now in condition for allowance. No new matter has been entered and no additional fees are believed to be required. However, if any fees are due with respect to this Amendment, please charge them to Deposit Account No. 09-0458 maintained by Applicant's attorneys.

Respectfully submitted,
WEI LU

CANTOR COLBURN LLP
Applicant's Attorneys

By _____
Sean F. Sullivan
Registration No. 38,328
Customer No. 29371

Date: February 13, 2006
Address: 55 Griffin Road South, Bloomfield, CT 06002
Telephone: (860) 286-2929